

CLAIMS

1. An oxygen stable composition comprising inert core particles partially or completely coated with at least one active compound encapsulated in a carbohydrate matrix, which matrix is characterised by

- 5 to 95 wt.% high molecular weight film forming carbohydrate;
- 5 to 30 wt.% mono, di and trisaccharides; and
- 0 to 30 wt.% maltodextrin

based on the total weight of the carbohydrate matrix;

the coated particles being further coated with a modified cellulose having reversible gel formation properties upon temperature increase.

2. The composition according to claim 1, characterised in that the film forming carbohydrate is present in an amount of 45 to 70 wt.%, preferably 50-60 wt.% based on the total weight of the carbohydrate matrix.

3. The composition according to claim 1 or 2, characterised in that the film forming carbohydrate is selected from the group consisting of gum arabic, gum acacia, lipophilically modified starches and mixtures thereof.

4. The composition according to any of claims 1-3, characterised in that the matrix contains 1-30 wt.%, preferably 5-30 wt.% of a sweetener selected from the group consisting of sorbitol, mannitol, xylitol, hydrogenated starch hydrolysates, lactitol, maltitol, erythritol, hydrogenated isomaltulose, and combinations thereof.

5. The composition according to claim 4, characterised in that 100 wt.% of the mono, di and trisaccharide material is a sweetener selected from the group consisting of sorbitol, mannitol, xylitol, hydrogenated starch hydrolysates, lactitol, maltitol, erythritol, hydrogenated isomaltulose, and combinations thereof.

6. The composition according to any of claims 1-5, characterised in that the active compound encapsulated in the carbohydrate matrix is selected from the group consisting of flavourants, fragrances, pharmaceuticals and wash-active components.

7. The composition according to claim 6, characterised in that the active compound is selected from limonene, citral, linalool and combinations thereof.
- 5 8. The composition according to any of claims 1-7, characterised in that the encapsulated active compound is present in an amount of 1-40 wt.%, preferably 10-20 wt.%, based on the total weight of the active compound containing carbohydrate matrix.
- 10 9. The composition according to any of claims 1-8, characterised in that the core particles are selected from the group consisting of tea fannings, tea dust, tobacco particles, acids, crystals of mono-, di- or trisaccharides, salt crystals, plant seeds, fibres, spray-dried particles and cellulose cells.
- 15 10. The composition according to any one of claims 1-9, characterised in that the core particles coated with the carbohydrate matrix and modified cellulose additionally comprise an external coating comprising at least 50 wt.% lipids with a melting point of at least 30°C.
- 20 11. The composition according to any of claims 1-10, characterised in that the core particles coated with the carbohydrate matrix, the modified cellulose and optionally a fat layer have a size in the range of 0.1 - 3 mm, preferably 0.2 - 1.5 mm.
- 25 12. The composition according to any of claims 1-11, characterised in that the weight ratio between the core particles and the carbohydrate matrix coating is from 5:1 to 1:5, preferably about 1:1.
- 30 13. The composition according to any of claims 1-12, characterised in that the weight ratio between the carbohydrate matrix coating and the cellulose coating is from 5:1 to 1:5, preferably about 1:1.

14. The composition according to any of Claim 1-13, wherein the modified cellulose is selected from methyl cellulose, hydroxypropyl cellulose, hydroxypropyl methyl cellulose, ethyl methyl cellulose, ethyl cellulose and mixture thereof.

5 15. A process for producing an oxygen stable composition comprising the steps of

- (a) forming an aqueous carbohydrate solution containing a carbohydrate mixture comprising 5 to 95 wt.% high molecular weight film forming carbohydrate(s), 5 to 30 wt.% mono, di and trisaccharide(s), and 0 to 30 wt.% maltodextrin(s);
- 10 (b) incorporating at least one active compound into the solution of step (a);
- (c) introducing the aqueous solution of step (b) into a fluid bed comprising inert core particles and using an inlet air temperature of 40 - 120°C, preferably 60 - 100°C, to obtain a core particle coated with the active compound encapsulated in a carbohydrate matrix; and
- 15 (d) introducing after step (c) modified cellulose as an aqueous solution with a concentration of 0.1 - 30 wt.% and preferably 2 - 10 wt.% into the fluid bed comprising the encapsulated active coated core particles and using an inlet air temperature of 40 - 120°C, preferably 60 - 100°C, to deposit a stable film onto the particles.

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16. Products comprising the oxygen stable composition according to any of claims 1-14 or the oxygen stable composition prepared by the process according to claim 15.

25 17. Products according to claim 16, wherein said products are sugar confectionery articles, preferably selected from chewing gum, hard boiled sweets, marshmallows, chewing sweets, and mixtures thereof.

18. Product according to claim 17, wherein the product is chewing gum.

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19. Products according to claim 16, wherein said products are selected from the group consisting of dry soups, dry sauces, sausages, snacks and noodles.

20. Products according to any one of claims 16-19, comprising between 0.1 and 5.0 wt.% of the oxygen stable composition.

21. Products according to any one of claims 16-20, wherein the products are
5 essentially sugar-free.

22. Use of a modified cellulose to improve the oxygen stability of one or more active compounds encapsulated in a matrix containing:

- 5 to 95 wt.% high molecular weight film forming carbohydrate;
- 10 - 5 to 30 wt.% mono, di and trisaccharides; and
- 0 to 30 wt.% maltodextrin

based on the total weight of the carbohydrate matrix; said use comprising coating the encapsulate with said modified cellulose.